Section-A(MCQ's)

Q.1 Choose the correct answer for each form the given potions:

(i) The unit of force in S.I unit is
(a) Kilogram (b) Newton (c) Metre (d) Second

(ii) Clockwise torque is considered as _________ torque.
(a) Positive (b) Negative (c) Unit (d) Zero

(iii) The number of protons in the nucleus is called _________.
(a) Mas number (b) Avogadro number (c) Atomic number (d) Nuclear number

(iv) The lightest particle in an atom is _________.
(a) Neutron (b) Electron (c) Proton (d) Deutron

(v) The speed of sound in air at normal temperature and pressure is _____ m/s.
(a) 336 (b) 672 (c) 712 (d) 785

(vi) The standard metre is made of _____ and is placed at the international bureau of weight and meausre in severes near paris.
(a) Platinium and copper (b) Iron and copper (c) Iron and iridium
(d) Platinium and iridium

(vii) Energy possessed by a body due to its position is called_______.
(a)Potential energy (b) Mechanical energy (c) kinetic energy
(d) None of these

(viii) If the effort on the lever is between the fulcrum and weight, the class of lever is called ___.
(a) First (b) Second (c) Third (d) None of these

(ix) In Case of satellites the necessary acceleration is provided by _______.
(a) Frictional force (b) Gravitational froce (c) Coulombs force (d) None of these

(x) The eye and the camaer are similar because the image formed in both is ______.
(a) Real and inverted (b) Real and errect (c) Virtual and inverted
(d) Virtual and errect

(xi) The speed of light is _______ m/s.
(a) 3×10^6 (b) 3×10^8 (c) 1.86×10^6 (d) 3×10^{10}

(xii) Elasticity of a substance depends on its:
(a) Temperature (b) Size (c) Nature (d) None of these

(xiii) All the rays, parallel to the principal axis, falling on the concave mirror, pass after reflection through its _________.
(a) Pole (b) Principal focus (c) Centre of curvature
(d) None of these

(xiv) If the force acting ona body is doubled, then the acceleration produced is ______.
(a) Quarter (b) Half (c) Same (d) Double

(xv) Dr. Abdul Salam was awarded Nobel Prize for his work on _______.
(a) Electronics (b) Radiation (c) Gravitation
(d) Grand unification theory

(xvi) The reason for bursting water pipes during very cold weather is that:
(a) Water pipe contract when cooled (b) Water expands on freezing
(c) Ice expands on melting (d) None of these

(xvii) The galvanometer can be converted into an ammeter by connecting a wire of low resistance
(a) In series (b) In parallel (c) With 220 volts (d) In combined way

Section-B

(Short Answer)

Note: Answer any EIGHT of the following questions .Each question carries 05 marks.

Q.2 What is Physics? Enlist some important branches of physics.

Q.3 What is meant by anomalous expansion of water? Describe its effects on every day life.

Q.4 Define reflection of light State the laws of reflection.

Q.5 What are the main defects of human eye? How are they removed?

Q.6 How is rainbow formed?

Q.7 Define momentum. Explain the law of conservation of meomentum with the help of examaples.

Q.8 How can a vector be determined if its rectangular components are known?

Q.9 State Coulombs law and define the unit of charge.

Q.10 Describe the construction of a simple pully.

Q.11 Describe strees and strain.

Q.12 The time taken by an electron to complete one rotation about its nucleous is 0.5×10^{-18} seconds. Convert it into minutes, hourse and microseconds.

Q.13 Explain vibrations, time period and frequency in sound.

Section-C

(Descriptive Answer)

Note: Answer any TWO of the following questions. Each question carries 14(7 + 7) marks.

Q.14 (a) How can determine the mass of earth by applying law of Gravitation?

(b) A bus is moving with the velocity of 72 km/h on the application of the breakes its stops after covering a distance of 500 m. Find hte retardation of the bus.

Q.15 (a) Define Hook's law and Young's modulus.

(b) A series circuit consisting of three resistors havign resistence 40 ohms. 50 ohms and 20 ohms respectively, is connected across each resister.

Q.16 (a) Define centre of gravity. How would you locate the centre of gravity of an irregular piece of metal sheet?

(b) A boy of mass 50 kg on motor bike is moving with 20 m/s . What is his kinetic energy?